

TECHNICAL DATA

# CPM-766

## Charged Plate Monitor



### Product Highlights

- Measures Decay and Balance (Offset Voltage) in accordance with ANSI/ESD STM3.1 and IEC 61340-4-7
- Uses rechargeable Li-ion batteries
- Up to 250 hours of battery life
- Automated test sequences of tests
- Selectable stop voltages for decay tests
- Programmable delayed start option
- Large color touchscreen LCD display
- Built-in temperature and humidity sensor
- Internal memory up to 200 data sets
- Fast response time
- Analog output

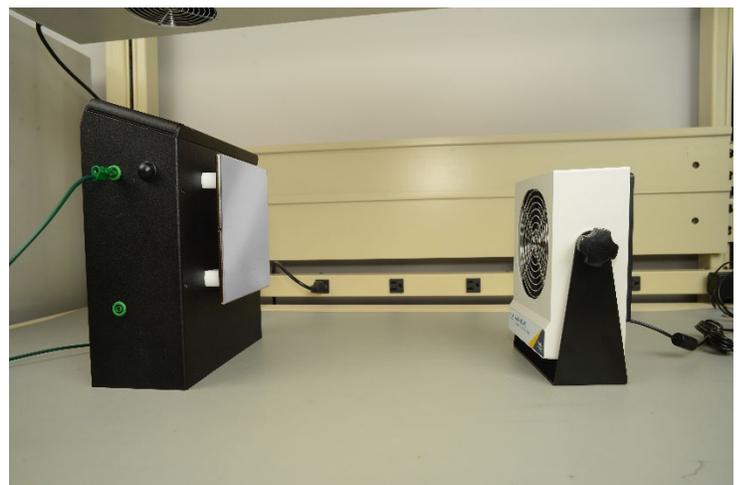
### What's included

- AC/DC Power Supply
- USB-C Cable
- 72" Ground Cord
- Q007B Common Point Ground Connector
- Carrying Case
- Microfiber Cloth
- NIST Traceable Calibration Certificate with Data

### A portable Charged Plate Monitor that evaluates the performance of ionizers per ANSI/ESD STM3.1 and IEC 61340-4-7

The CPM-766 is an advanced Charged Plate Monitor that utilizes a microprocessor for assessing the effectiveness of air ionizers in neutralizing static charge within ionization systems. It offers the capability to conduct positive and negative decay tests, as well as balance (offset voltage) tests, enabling the determination of the operational efficiency of an ionization system. Compliant with the ESD Association Standard ANSI/ESD STM3.1 and IEC 61340-4-7 Ionization, the CPM-766 is suitable for testing various types of ionization systems.

The CPM-766 conducts both manual and automatic decay and balance tests to qualify and periodically verify ionizers. Its internal memory is capable of storing up to 200 test data. The test data includes balance averages, temperature and humidity, date and time and can be saved under specified locations and areas.



## General Specifications

| PERFORMANCE                                |   |
|--|---|
| Charging Range                             | ±1,250 ±5% volts DC   |
| Charging Speed                             | Charges from zero to over ±1000 volts in 3 seconds at ambient conditions  |
| Accuracy                                   | Voltage Monitor Output: Better than ±5% of reading, ±10 mV<br>Voltage Display: Better than ±5% of reading, ±2 counts              |
| Response Time                              | 150ms (90-10%)  |
| 3dB Bandwidth                              | 6.5 Hz  |
| Sensor Noise Signal (Typical) <sup>1</sup> | Maximum Voltage: +3 volts<br>Minimum Voltage: -5 volts  |
| OUTPUT                                     |   |
| Connection Type                            | BNC Connector located on the back panel   |
| Analog Output                              | ±2 Volts  |
| Scale Factor                               | 1 Volt output corresponds to 10 kV  |
| ISOLATED CONDUCTIVE PLATE                  |   |
| Conductive Plate Size                      | 6.0" x 6.0"<br>15.2 cm x 15.2 cm  |
| Capacitance                                | 20 pF ±2 pF   |
| Plate Voltage Retention                    | Floating plate voltage discharges less than 10% over a 5 minute period when charged to over 1kV <sup>2</sup>                      |
| Plate Spacing                              | 0.805" (2.4 cm) between isolated and ground plates  |
| Spacers                                    | Plate spacers made from machined virgin, white Teflon <sup>®</sup>  |
| Plate Construction                         | Aluminum<br>Bright nickel plating<br>Conductive plate is not detachable   |
| DISPLAY                                    |   |
| Type                                       | Color Capacitive Touchscreen  |
| Size                                       | 5.0" Diagonal   |
| Resolution                                 | 800 x 480 pixels  |
| Response Time                              | 10ms Typical  |
| Surface Treatment                          | Anti-Glare  |
| Touch Point                                | 5   |
| Glove Use                                  | Supports PVC, PE, Lightweight Rubber Gloves (0.3mm thick)   |
| GROUNDING                                  |   |
| Case                                       | 2 green banana jacks mounted on the side panel  |
| TEMPERATURE & RELATIVE HUMIDITY SENSOR     |   |
| Temperature Accuracy <sup>3</sup>          | ±2°F (±1°C)   |
| Relative Humidity Accuracy                 | ±10%  |
| POWER                                      |   |
| Battery                                    | Re-chargeable Li-Ion battery (included). Battery swappable through easily accessible battery door at the bottom of the instrument |
| Battery Life                               | 250 hours when in standby mode<br>48 hours typical<br>10 hours (of continuous use)<br>Approximately 1000 decay tests              |
| Charging                                   | Rechargeable via USB 2.0 through PC port or Wall Charger (included)   |
| Charging Time                              | 4 hours (from 1 to 100%)  |
| MEMORY                                     |   |
| Capacity                                   | 200 Data Sets   |
| Data Sets                                  | Data sets include Decay Time, Start and Stop Voltage, Min/Max/Avg, Temperature & Humidity, Location, Area and Timestamp           |
| ENVIRONMENT                                |   |
| Operating Temperature                      | 10°C to 30°C (50°F to 80°F)   |
| Operating Relative Humidity                | 0% – 80%, non-condensing  |
| Operating Altitude                         | 2000 m  |
| PHYSICAL SPECIFICATIONS                    |   |
| Dimensions (HxWxL) <sup>4</sup>            | 5.5" x 8.9" x 10.6"<br>13.9 cm x 22.6 cm x 26.9 cm  |
| Weight                                     | 4.83 lbs (77.28 oz.) with battery<br>4.69 lbs (75.04 oz.) without battery   |
| Case Material                              | Aluminum  |
| WARRANTY                                   |   |
|  | 2 years on circuit board<br>1 year on the display<br>1 year on sensor <sup>5</sup>  |

<sup>1</sup> Typical specifications are not guaranteed

<sup>2</sup> When measuring at <70% Rh

<sup>3</sup> Accuracy based on the instrument while not actively charging

<sup>4</sup> When in overhead measurements position

<sup>5</sup> Warranty on the sensor limited to a defective sensor that was not dropped or used for measuring a source greater than 20kV.

## 801B-012 Li-Ion Battery Pack

| General Specifications          |  |
|---------------------------------|--|
| Battery Type                    | 3-cell, Rechargeable   |
| Technology                      | Lithium-Ion Technology   |
| Nominal Capacity                | 2400mAh  |
| Output Voltage                  | 3.7V   |
| Performance Amp-Hour            | 2.4Ah  |
| Performance Watt-Hour           | 8.88Wh   |
| Transport Safety Certified      | UN38.3   |
| IATA UN Number                  | UN3480   |
| IATA Class (Sub Hazard)         | 9  |
| Operating Temperature           | Discharging: -20°C to 60°C (-4°F to 140°F)<br>Charging: 0°C to 45°C (32°F to 113 °F) |
| Storage Temperature             | -5°C to 35°C (-23°F to 95°F)   |
| Storage Humidity                | ≤75% Rh  |
| Battery Pack Dimensions (WxHxD) | 53mm x 48.5mm x 15mm<br>2.0" x 1.9" x 0.6"   |
| Weight                          | 65g (2.2 oz)   |
| Certification                   | CE Approved. Complies with EU Batteries Regulation 2023/1542.                        |

## Packing Instructions (P.I.)<sup>1</sup>

|  |                                  |
|--|----------------------------------|
| When battery is packaged separately (e.g. a replacement battery pack): | IATA P.I. 965 Section IB applies |
| When battery is packaged with the instrument, not contained in it:     | IATA P.I. 966 Section II applies |
| When battery is contained within the instrument, then packaged:        | IATA P.I. 967 Section II applies |

<sup>1</sup> Per IATA 2021 regulations. Regulations subject to change without notice.

The 801B-012 battery packs have been tested and were found to comply with the criteria of "UN Model Regulations, Manual of Test and Criteria, ST/SG/AC.10/11/Rev.7 Part III, subsection 38.3", also known as "UN38.3". As a result they can be shipped unrestricted internationally by any means.

Ensure that any shipment packaging that contains these batteries is properly marked on the outside of the package for containing Li-ion batteries, using the label as described in the 'Additional Requirements Section' of Packing Instructions 965...970. Minimum size of the label is 120 x 110 mm (4.75 x 4.33 inches).

## Ordering Information

| Part No. | Description                        |
|----------|------------------------------------|
| CPM-766  | Charged Plate Monitor <sup>1</sup> |

<sup>1</sup>Includes grounding and charging accessories, and a carrying case

## Optional Accessories

| Part No.  | Description                               |
|-----------|---|
| 801B-012  | Rechargeable Li-ion Battery Pack          |
| PFP-861LL | 72 inch Test Lead, Green                  |
| 800B-001  | AC/DC Power Supply with Multi-Blade Input |
| 700-001   | USB 2.0 A to USB-C Cable                  |
| Q007B     | Common Point Ground Connector             |
| CPM-700C  | Carrying Case                             |
| 766-034   | Microfiber Cloth - Black                  |
| 766-020   | BNC Cover                                 |

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